

recap of ARCHER WG call on May 12

05/15/2009

Greetings,

We had a productive call on Tuesday. Thanks to all who attended.

Agenda:

- 1) Welcome and Introductions
 - a) Attendees: Carol Mladinich (USGS), Nick Carbone (MODNR), Susan Stitt (USGS), Don Friend (MSU), Fei Yuan (MSU), Christina Wilson (EPA), Dave Roach (EPA/USGS), Branden Doster (MODNR), Shawn Muenks (MODNR), Mike Sharp (OK CC), John Salvador (CAP), John Desmarais (CAP), Mark Kunkowski (CAP), Gene Hartman (CAP), Ed Smith (CAP), Kevin White (SCC)
- 2) USGS Update
 - a) Terry Slonecker reported that the MOU between USGS and the Air Force is in its final stage, awaiting signature by the Air Force. This MOU will allow USGS to transfer funds to CAP for flight missions, Terry plans several flights in VA and PA.
- 3) Minnesota State University Update
 - a) Don and Fei are working on a project mapping the Blue Earth River quality using ARCHER imagery. They reported finding good correlation with the bands and are looking at water turbidity. They were able to quantify turbidity using a band ratio and achieved $R^2 = 85\%$. They are looking at nitrates in the water and found they could go back upstream and see which parcel are contributing the most. The flight was flown at 5,000' with a 2-meter spatial resolution and found it gave good results.
 - i) Nick - DNR project looking at natural resource damage assessment on rivers (work being done by USGS CERC and Univ MO, Columbia); he asked if there might be a correlation between turbidity and stream health. Fei replied not likely, that there are so many variables that quantify stream health but using turbidity as one of the variable would be possible
 - ii) Nick - DNR is primarily looking at mine tailings waste in water, are there any unique metals in the water that they may be able to pick up with ARCHER? Fei replied that they take water samples and analyze them in a lab and ARCHER HSI, they want to see if they can correlate the two, they are also using a spectrometer in the lab to see if they can pick up anything, they have been able to pick up such components as TSS, chlorophyll-a, and nitrates
 - iii) MSU researcher had submitted a proposal to investigate spectral deconvolution with ARCHER imagery, the proposal was not funded but the idea may prove useful for exploration, Nick asked for a copy of the proposal
 - b) Don suggested we organize a special session on ARCHER at next year's Association of American Geographer's (AAG) annual meeting being held in Washington, D.C. next April 14-18, 2010. He suggested we have presentations from researchers using ARCHER, CAP, and SCC
 - i) Carol will investigate have space in the USGS booth in the exhibits room
- 4) MODNR Update
 - a) Nick showed a power point presentation of DNR contamination related activities from 2005 and 2009. Nick said their processing may not be sophisticated and scientifically rigorous but their goal is to provide managers with information about potential contamination sites so they can better manage remediation efforts
- 5) Questions and Comments
 - a) A good discussion on what SCC software would be appropriate for the ARCHER ground station? Nick and Carol both answered that for emergency response GeoSharpen would be the greatest benefit, GeoReg which processes the all bands in the file would be appropriate in regional offices or some facility to provide the imagery to researchers
 - b) Kevin White mentioned they were looking into Google earth/KML capabilities for output
 - c) John Salvador will be in Denver the week of July 6 and would like to visit RMGSC and see how we are processing and using the imagery
 - d) Carol mention that she would be creating a website for the group and could post documents of interest for wider dissemination, when the website is live an email will be sent out

If anyone has any problems or questions please contact me.

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